

# Introduction to Methodology: Virtual Special Issue for the *Journal of Design History* 2018

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Design historians generally avoid extended self-reflection or discussion of how they conduct research. Typically, they use historical research methods, yet design historians have also used methods borrowed from art history, cultural and literary studies, anthropology, sociology or other social sciences. This Virtual Special Issue, comprising articles drawn from past issues of the *Journal of Design History*, addresses the state of design history's methodology. While few authors in the *Journal* have focused specifically on the topic of methodology, their implicit adoption of an eclectic variety of research methods over the past thirty years is revealing. This Introduction seeks to contextualize a collection of twelve articles within a brief overview of methodologies in history, art history and design history. The articles are then linked to scholarship beyond the *Journal of Design History*, and the final section presents additional methodological possibilities for design historians.

**Keywords:** methodology—historiography—history—material culture—anthropology

## Introduction

Used and abused by academics in peer reviews, book reviews and thesis examinations, the word elicits fear in students and confusion in almost everyone else. 'Methodology' literally means the study of methods—or ways of doing things—yet it also refers to a set of principles or practices that regulate an academic discipline. In the latter sense, a methodology comprises the methods, techniques or processes that guide research. A methodology is how researchers identify, gather and analyse evidence. Beginning with a short background on methodologies developed in historical research, my aim in this article is to review the methodologies used by design historians in an accessible and provocative way. I intend this *Virtual Special Issue*, comprising articles drawn from the *Journal of Design History*, to both survey the field's methodologies and suggest possibilities for future research. As a first, general observation, design historians in the *Journal* have had very little *direct* engagement with methodology: there is surprisingly little reflection on how their research was conducted. However, *indirect* engagements are numerous and varied. Although most often unacknowledged, methodology is a topic I believe design historians need to address in order to clarify and enhance the discipline, both for themselves and for a broader audience.

## History's methodologies

In the mid-nineteenth century, German historian Leopold von Ranke established an influential methodology based on original, archival research and close scrutiny of primary sources. Often described as the 'founder' of modern historical methods, Ranke established and promoted the idea of historical research modelled on scientific principles.<sup>1</sup>

Rather than compose histories to instruct people of the present, he argued, an historian should pursue the objective truth and represent the past *as it was*. 'History', Ranke wrote in his 1826 *History of the Latin and Teutonic Nations*, 'has been assigned to it the task of judging the past, of instructing the present for the benefit of the future ages. To such high offices this work does not presume: it seeks only to show what actually happened.'<sup>2</sup> Although he never explicitly defined them, Ranke's methods as used in his books formed the basis of academic history in Germany and across Europe as the discipline was institutionalized in the second half of the nineteenth century.<sup>3</sup> Importantly, Ranke's methodology was secular, scientific and autonomous, and served to distance history from theology, the classics, literature and philosophy.

Ranke's 'three-step method'—gather primary sources from archives, critically interpret them, then order the results into a coherent narrative—became fundamental for academic historians.<sup>4</sup> His primary sources comprised documents such as diplomatic reports and letters residing in official state archives, resulting in primarily political and military themes. By critically examining such sources, Ranke held, the historian could re-present objective truths about events and people of the past. 'Everything hangs together', he wrote, 'critical study of authentic sources, impartial understanding, objective narration—the goal is to bring to life the whole truth'.<sup>5</sup> Later historians inherited two crucial assumptions from Ranke: first, people and events of the past were observable and verifiable, and, second, by analysing and interpreting primary sources, historians could reconstruct the past objectively.<sup>6</sup>

A former student of Ranke's, Jacob Burckhardt, pursued an alternative path that encompassed both a wider thematic range and new sources. His 1860 book, *The Civilization of the Renaissance in Italy*, for example, included documentation of everyday life such as festivals, food and fashion, and his later research produced volumes on art and architecture.<sup>7</sup> While Burckhardt used different sources to Ranke, both sought, through examining their respective evidence, to illuminate the zeitgeist, or unifying spirit of a given era.<sup>8</sup> But Burckhardt, critical of Ranke's reliance on official documents, 'gave primacy to poetry, myth, imagination, memory, observation, sense perception, and historical consciousness'.<sup>9</sup> He also disputed Ranke's claims to objectivity, suggesting that 'the outlines of a given civilization present a different picture' to each researcher.<sup>10</sup> Questioning objectivity became important to later historians, as nineteenth-century academic history and its methods reflected the interests of its writers and its institutions: European, middle-class and male.

## History's interdisciplinary turns

In the early twentieth century, some historians began to borrow methods from adjacent disciplines.<sup>11</sup> Founded in 1929, the French journal *Annales d'Histoire Economique et Sociale* (Annals of Economic and Social History), for example, encapsulated a new interest in social history. Founding editors Marc Bloch and Lucien Febvre composed histories using not only written documents but landscapes, fashion and folklore as primary sources. Critical of the limited sources used by academic historians, Bloch argued in his 1944 book *The Historian's Craft* that 'the variety of historical evidence is nearly infinite', and urged historians to gather various sources in order to understand a historical problem with greater depth.<sup>12</sup> In 1953, Febvre went further and declared: 'Historians, be geographers. Be jurists too, and sociologists, and psychologists.'<sup>13</sup> For Febvre and Bloch, an analysis of deep social and cultural structures—*mentalities*—rather than just political and military events, required gathering and interpreting a broad range of evidence.

The culmination of the Annales project was the work of their colleague, Fernand Braudel. Braudel advocated an historical method that could incorporate geography, economics and sociology in order to draw expansive cultural structures into the foreground. His 'geo-history', *The Mediterranean and the Mediterranean World in the Age of Philip II*, for example, comprised a history of long-term processes, *la longue durée*, or 'the multiplicity of time, and of the exceptional value of the long time span'.<sup>14</sup> Braudel's later *Capitalism and Material Life, 1400–1800*, defined material life as 'repeated actions, empirical processes, old methods and solutions handed down from time immemorial, like money or the separation of town from country'.<sup>15</sup> As well as written sources, Braudel included housing, furniture and fashion in this grand synthesis, also drawing upon economics and geography with his inclusion of population statistics, demographic tables and maps charting cultures and civilizations.<sup>16</sup>

## Social and cultural history

Reflecting both the social upheavals and changing demographics of universities in Europe and the United States, the post-war 'culturalist turn' challenged history's fundamental methods. Beginning in the 1960s, historians increasingly confronted issues of class, gender and race. History 'from below' such as E.P. Thompson's work on working-class England, signalled a growing interest in everyday lives and practices.<sup>17</sup> Directly linked to the women's liberation movement of the 1960s and 1970s, feminist historians such as Shelia Rowbotham rethought methodologies that had long functioned to 'hide' women.<sup>18</sup> Post-colonial scholars questioned academic history's Eurocentric methods.<sup>19</sup> One result of these upheavals was the acknowledgement that the vast majority of people of the past left no written records, primary sources or physical evidence. Historians confronted the idea that what survives from the past in archives, museums and other collections, is extremely selective. They also understood that the first two steps of Ranke's method—gathering and interpreting sources—could only ever tell certain truths about the past.

A final challenge to historical methods was the question of how the analysis of sources is ordered. Hayden White, in his influential *Metahistory*, for example, argued that while historical evidence may be factual, the structure is imposed by the historian is not. For White, 'there has been a reluctance to consider historical narratives as what they most manifestly are: verbal fictions'.<sup>20</sup> After what has been termed the 'postmodern' or 'linguistic turn' of the 1970s and 1980s, historians retreated from claims to objective truth and a standard methodology.<sup>21</sup> Even in science, Paul Feyerabend's 1975 *Against Method* challenged the rigid set of principles or rules governing scientific research practice, suggesting only one enduring principle: 'anything goes'.<sup>22</sup> By the end of the twentieth century, Ranke's founding method—gather primary sources from archives, critically interpret them, and order the results into a coherent narrative—had been challenged at every step.

As an academic practice, history appeared to be in crisis.<sup>23</sup> But, despite problems analysing and ordering documents, the past still surrounds us in myriad physical forms—from paintings to buildings—and other traditions had long been developing alternative methods for working with these. In his comprehensive research on Renaissance Italy, for example, Burckhardt analysed paintings, sculpture and architecture, instigating a new type of cultural history focused on objects rather than documents that continued into the twentieth century. Art, architecture and objects of everyday life might also illuminate the past, and methods for gathering and interpreting them developed in tandem with challenges posed by social, feminist and postcolonial historians.

## Art history and design history

Heinrich Wölfflin, who studied under Burckhardt and succeed him as Art History chair at Basel University, first codified a specific methodology for art historical research. In his 1915 book, *The Principles of Art History*, Wölfflin proposed a method of close ‘reading’ of paintings and sculptures, then ordering them into a sequence of styles. With debts to both Giorgio Vasari’s portrayal of artists as innovators rather than simply technicians and Johann Joachim Winckelmann’s writings on antiquity, Wölfflin provided a structural framework for understanding art’s patterns of stylistic development.<sup>24</sup> Translated into English in 1935, Wölfflin’s *Principles* illuminated a comparative method of formal and stylistic analysis in terms of paired qualities (such that, for example, the Renaissance was understood as ‘linear’, while the Baroque was ‘painterly’).<sup>25</sup>

In the early twentieth century, art history limited its field of inquiry to *significant* artefacts of human manufacture. Its objects, according to Wölfflin, are ‘uniquely privileged in the degree to which they are able to communicate, symbolize, express, or embody certain deep or fundamental truths about their makers or sources, whether that be a single person or an entire culture or people.’<sup>26</sup> Within this restricted range of sources, Wölfflin’s aim was to identify links between individual paintings or sculptures and the style of the era, charting their distinctive characteristics and changes over time. Art historians who followed Wölfflin, such as Erwin Panofsky and Aby Warburg, further developed iconographic methods that would enable scholars to systematically extract meaning from art works by analysing motifs, symbols and styles.<sup>27</sup>

Two art historians trained in the German tradition, Nikolaus Pevsner and Siegfried Giedion, had a significant impact on later design historians. Both studied with Wölfflin, and both were originally Baroque art specialists who extended their research into architecture and design.<sup>28</sup> Soon after moving to England, Pevsner’s first foray into design began as a commissioned research project. During 1934 and 1935, Pevsner interviewed Birmingham manufacturers, department store owners, art schools, architects and designers on the state of the industry, including the design and marketing of industrial objects from furniture to cars.<sup>32</sup> His report, later compiled into *An Enquiry into Industrial Art in England*, revealed an interest in economics and sociology, as well as art historical methods. Ultimately, Pevsner argued that ‘90% of British industrial art is devoid of any aesthetic merit’, revealing an intention to improve British design.<sup>29</sup>

Pevsner’s 1936 *Pioneers of Modern Design*—essentially an art history of European modernist design—continued this polemic by establishing a qualitative distinction between significant objects (later ‘good design’) and everything else. Following his art history training, Pevsner constructed a narrative of significant (male) designers and designed artefacts, together comprising a ‘style’ appropriate to the modern age.<sup>30</sup> However, his was not a formalist or iconographic analysis but, for Pevsner, ‘styles are taken as expressions of socially and even politically definable formations’.<sup>31</sup> His methods and focus reveal the interests of a German art historian in England with a pedagogical, if not didactic purpose—to promote a particular version of German modernism with English roots and to convert both design institutions and the general public to this style.<sup>32</sup>

In contrast, Siegfried Giedion’s 1948 *Mechanization Takes Command* aimed ‘to discern how far mechanization corresponds with and to what extent it contradicts the unalterable laws of human nature’.<sup>33</sup> Conducted in the United States from 1941 to 1945, Giedion’s research traces the effects of mechanization on various aspects of human life. Rather than a stylistic interpretation of manufactured artefacts, Giedion proposed a ‘typological approach’.<sup>34</sup> This involved allowing the source material to guide him

vertically through periods in time: 'For only through simultaneous perception of various periods and of various fields within a period can there be insight into the inner growth'.<sup>35</sup> This way, Giedion aimed to explain changes in industrial production and consumption, as well as concepts of taste and comfort, and their effects on society and culture. Both Pevsner and Giedion, despite their differing approaches and sources, applied and adapted art historical methods to manufactured objects, inspiring the first generation of specialist design historians.

## Material culture in history and anthropology

Meanwhile, a 'material turn' in academic history resulted in a new attention to artefacts, one in which historians considered artefacts not simply as props but tools that have meaning and actively shape human lives.<sup>36</sup> This turn to material culture grew from an interest in local and social history, and expanded into specialized academic research from the 1970s.<sup>37</sup> On a popular level, the rise of preservation movements and the heritage industry encouraged research on historical artefacts and architecture. Historian David Lowenthal, for example, remarked upon the 'tangible familiarity' of relics from the past and emphasized their bridging function since 'artefacts are at once past and present'.<sup>38</sup> As residues of the past, physical artefacts connect us to past events and people through their immediate, sensorial impact. Mainstream historians mined this rich vein of material culture, culminating in studies such as Simon Schama's *The Embarrassment of Riches* (1987) and Asa Briggs's *Victorian Things* (1988).<sup>39</sup> Both drew extensively upon material culture in their illumination of Dutch seventeenth-century life and Victorian England, respectively.

Anthropologists also turned to material culture, spawning 'material culture studies' in the 1980s, a field focused on the social and cultural meanings of everyday objects.<sup>40</sup> Cultural anthropologists compiled detailed analyses of the relationship between manufactured things and people, using ethnographic methods, particularly in the form of interviews and observations.<sup>41</sup> Although these methods necessarily maintained a focus on the present rather than the past, a renewed interest in archeology also infused material culture studies.<sup>42</sup> A key concept for design historians was the idea that artefacts actively 'script' their users and shape behaviour.

From yet another perspective, a 2001 article by Bill Brown inaugurated a renewed interest in materiality in literary and philosophical research via 'Thing Theory'. While acknowledging anthropologists' and sociologists' recent interest in material culture, Brown suggested we must go further in order to understand 'how inanimate objects constitute human subjects, how they move them, how they threaten them, how they facilitate or threaten their relation to other subjects'.<sup>43</sup> Previously characterized by researchers as inert, objects are now considered active agents within dynamic networks of human and non-human agents, shaping as well as shaped by human experiences. Researchers are still exploring the methodological consequences of such concepts.<sup>44</sup>

## The new design histories and methodology

Clive Dilnot's two-part survey of the state of design history in *Design Issues* in 1984 encapsulated the progress and problems of the emerging field. The 'new' design histories of the 1970s, Dilnot argued, were characterized by a 'general lack of historical, methodological, or critical self-reflection'.<sup>45</sup> In education and in professional practice,

he noted, 'design history is called on to legitimate particular forms of contemporary design practice', suggesting a continuation of Pevsner's polemical, instrumental aims.<sup>46</sup> Dilnot called for a method beyond celebrating iconic artefacts and individual designers, one that could engage with design in 'the much broader Papanekian sense as, 'the conscious attempt to impose meaningful order . . . the planning and patterning of any act toward a desired foreseeable end,' and that sees professional design as a particular historical form of this more fundamental activity.'<sup>47</sup> However, he offered little practical advice on how to implement this.

Importantly, feminist challenges in the 1980s, such as that of Cheryl Buckley, argued that methods used in design history had resulted in the absence of women. 'These methods,' she argued, 'which involve the selection, classification, and prioritization of types of design, categories of designers, distinct styles and movements, and different modes of production, are inherently biased against women and, in effect, serve to exclude them from history'.<sup>48</sup> In a different way, Tony Fry's *Design History Australia* noted the methodological limitations of design history in terms of 'the design object as fetish',<sup>49</sup> challenging the fixation on finished artefacts. His case studies offered an alternative approach that analysed neither significant objects nor individual designers but instead analysed a 1920s promotional campaign, a confectionary business and a contemporary theme park, mixing analysis of design in a broad sense with economic, social and cultural history.

John A. Walker's 1989 *Design History and the History of Design*, also sought to reflect on the new discipline, 'the purpose of which is to explain design as a social and historical phenomenon'.<sup>50</sup> He identified documents, plans, models, photographs, drawings, artefacts and interviews as design history's primary sources.<sup>51</sup> Walker's Production-Consumption Model, 'designed with modern Western society in mind (1700-1980s), the era of the capitalist mode of production',<sup>52</sup> comprised a theoretical framework adapted from Marxism through which to filter manufactured objects. In terms of methods, Walker noted various options, including a 'Materials/Techniques' approach—arranging objects according to materials and associated technological processes,<sup>53</sup> a 'Comparative Model', based on establishing similarities and differences between two objects, designers or styles (popularized by Wölfflin),<sup>54</sup> a 'Typological Approach' in which researchers identify recurrent, general features (popularized by Pevsner and Giedion),<sup>55</sup> as well as methods derived from Anthropology, Social History, Structuralism and Semiotics.<sup>56</sup>

The *Journal of Design History* began within this plural methodological environment of the 1980s. In the first editorial in 1988, Christopher Bailey wrote that the *Journal's* aim was 'not to propose a unifying academic practice, with pretensions to universality'.<sup>57</sup> Following this, authors used a variety of different methods, source material and approaches over the next thirty years. To try and encapsulate this variety within a limited number of articles results in a somewhat arbitrary collection of twelve articles. Notable exclusions from this collection, and an important contribution to methodology in the *Journal*, are the many introductions to special issues, excluded here because they do not stand alone without their accompanying articles.<sup>58</sup> The selection that follows aims to highlight and order design history's methodological variety in a coherent manner appropriate to the discipline, with the categories below—Objects, Types, and Discourses—indicating both the scale of the studies as well as their primary focus. However, these categories are not intended to be mutually exclusive, and some articles could appear in more than one. The categories and their articles are discussed in detail below.



## List of articles from the *Journal of Design History* for methodologies virtual special issue

### *Objects*

1. Tim Putnam, 'The Theory of Machine Design in the Second Industrial Age', 1, no. 1 (1988): 25–33.
2. Kenneth Agnew, 'The Spitfire: Legend or History? An Argument for a New Research Culture in Design', 6, no. 2 (1993): 121–130.
3. Nick Stanley, 'The Unstable Object: Reviewing the Status of Ethnographic Artefacts', 2, no. :2/3 (1989): 107–122.
4. Jane Graves, 'When Things Go Wrong . . . Inside the Inside': A Psychoanalytical History of a Jug', 12, no. 4 (1999): 357–367.

### *Types*

1. Sara Pennell, 'Pots and Pans History': the Material Culture of the Kitchen in Early Modern England', 11, no. 3 (1998): 201–216.
2. Margaret Campbell, 'From Cure Chair to *Chaise Longue*: Medical Treatment and the Form of the Modern Recliner', 12, no. 4 (1999): 327–343.
3. Pauline Garvey, 'How to Have a 'Good Home': the Practical Aesthetic and Normativity in Norway', 16, no. 3 (2003): 241–251.
4. Paul Atkinson, 'Man in a Briefcase: the Social Construction of the Laptop Computer and the Emergence of a Type Form', 18, no. 2 (2005): 191–205.

### *Discourses*

1. Stephen Hayward, 'Good design is largely a matter of common sense': Questioning the Meaning and Ownership of a Twentieth-Century Orthodoxy', 11, no. 3 (1998): 217–233.
2. H. Kumar Vyas, 'The Designer and the Socio-Technology of Small Production', 4, no. 3 (1991): 187–210.
3. Anna Calvera, 'Local, Regional, National, Global and Feedback: Several Issues to be Faced With Constructing Regional Narratives', 18, no. 4 (2005): 371–383.
4. Grace Lees-Maffei, 'The Production-Consumption-Mediation Paradigm', 22, no. 4 (2009): 351–376.

### *Object-Based Studies*

From the *Journal of Design History's* first issue, Tim Putnam builds on Siegfried Giedion's 'anonymous design history' in a case study of an American machine-tool

manufacturer, Brown and Sharpe. Putnam's primary method is a close reading of a 1911 'style manual' issued by the company's Chief Draughtsman, Luther Burlingame. Putnam analyses the manual's text, photographs, engravings and sketches, in order to reveal how this particular manual (rather than any one individual) codified the company's design programme. By analysing archival sources from Brown and Sharpe, Putnam's research reveals how design processes worked in an era before specialist design consultants, making it also a useful contribution to the history of design management.

Few practising designers have contributed to the *Journal* over the past three decades, but Kenneth Agnew identifies a crucial problem for object-based research from a designer's perspective. Designed objects, he argues, 'embody extensive knowledge but usually cannot communicate it.' That is, without additional documentation such as plans, specifications, marketing or distribution material, it is difficult to evaluate the success (or failure) of a particular object or design process. In his case study, Agnew notes that the Spitfire's longevity suggests it was a successful aircraft, but the absence of documentation makes it difficult to learn how and why it was designed like it was. Agnew argues that the 'design solution is simply the probable best solution under the current circumstances to the 'altered' problem. It usually follows that the insight is not recorded and all that is left is the one particular design solution.' A complex manufactured object such as the Spitfire developed over time, as a result of many hands and minds.

From its inception, the *Journal of Design History* devoted space to museums, archives and collections, and this early article by Nick Stanley opened up numerous possibilities. His provocative problem is that of trying to understand how to understand a collection of designed artefacts with little (written) historical evidence. An historicist understanding (to leap back in time and understand the objects 'as they were') is almost impossible in the case of artefacts collected in the Pacific in the early twentieth century, as they were stripped of the usual contextual information such as location, dates, cultural meanings, and even use. Stanley draws upon anthropological research methods, particularly Kopytoff's 'biography of a thing',<sup>59</sup> and examines the letters and documents of the collectors as well as contemporary collecting practices and sources such as Codrington's *The Melanesians*. These 'unstable' or 'restless' artefacts, ordered and framed within a particular museum context, have their own 'biographies' that are rarely made explicit in museums.

A radically different approach to objects is proposed by Jane Graves' psychoanalytic method. She uses British psychoanalyst D.W. Winnicott's paper 'Transitional Objects and Transitional Phenomenon' to understand personal meanings embedded in a single, everyday object. The object, a jug, she argues, operates like Winnicott's transitional 'bridge' between a child and the external world, using psychoanalytic theory to help us understand the powerful feelings attached to objects (in Graves' case, mourning). In academic research, such personal approaches are generally considered not objective enough—but Graves documents her relationship with the jug in a kind of psychoanalytic 'poetics of design'.<sup>60</sup> Though idiosyncratic, Graves' method offers us an alternative means of analysing the relationship between people and objects.<sup>61</sup> Memories embedded in the object, a confusion between human and what she terms the 'perverse' object, in which 'the distinction between the animate and the inanimate, the self and the object is lost'—such psychoanalytical concepts might be further utilized by design historians.



## Type-based studies

Beyond a single object, Sara Pennell focuses on English kitchens from 1650 to 1750, 'as a major site for both consumption, and its counterpart, accumulation'. To do this, she examines evidence from probate inventories from two parishes from London and Norwich. She draws upon Bill Hillier and Julianne Hanson's method of mapping buildings as 'social objects' in order to understand how people used and understood the early modern kitchen.<sup>62</sup> Additionally, she uses physical evidence of remaining houses but notes, with regard to utensils and tableware, for example, the lack of datable evidence, the differing terminology used to describe common objects (such as the 'dredging box'), types of technology used, materials, uses and differences in consumers. Pennell's analysis of kitchen artefacts also reveals inscriptions that imply their value as memories and as evidence of female agency.<sup>63</sup>

Margaret Campbell focuses on the origins and modifications of a specific furniture type, the reclining chair, particularly within a medical context. Her method comprises analyses of photographs, advertisements, postcards and paintings in addition to patents by furniture makers and surgeons. She not only draws on Giedion's 'types', but begins with Giedion's claims about reclining chairs and relaxation producing a demand for adjustable furniture. In furniture specifically designed for invalids and patients in the late nineteenth century, Campbell identifies the problems as not only comfort but cleanliness, cost and mass production. Crossing into medical history, Campbell argues that 'the frequent use of recliners in European sanatoria and other convalescent and spa establishments resulted in these becoming a familiar type of early twentieth-century chair forms'. In the hands of designers such as Charlotte Perriand, Marcel Breuer and the Aaltos, these therapeutic chairs became associated with leisure and luxury.<sup>64</sup>

Pauline Garvey's article on the Norwegian home relies primarily on ethnographic methods. Her object is less an object type and more an aesthetic category. Research, she notes, was carried out by her in the Norwegian town of Skien, 'through unstructured, prearranged interviews and in-depth ethnographic analysis of residents'.<sup>65</sup> Her focus is on types of interior decoration, in which the 'practical can be codified as an idiom on which householders draw to legitimate their consumption preferences'. Garvey's analysis reveals the relationship between Norwegian cultural values, class values and domestic consumption—'the articulation of taste' and perceptions of egalitarian values. These Garvey connects to broader narratives of national identity rooted in the nineteenth century. Her argument 'illustrates how the practical as an ideal provides one model for social inclusion or complementarity in the face of some, but not total, material distinction'. Her method is also a good example of the resonance designed artefacts from the past have in the present.

Paul Atkinson's article on the development of the laptop questions the idea of technological progress towards a certain type as inevitable, as well as exploring the relationship between pop culture's futuristic technologies and modernist design.<sup>66</sup> Atkinson based his research on brochures, advertisements and catalogues gathered from the National Archive for the History of Computing at the University of Manchester. To these he added interviews with designers and an interpretation of popular culture such as James Bond films where, he argues, ideas about how futuristic portable technologies would look emerge. Atkinson identifies a recurring theme of the executive briefcase containing new technologies, not so much driven by technological possibilities but by 'the desire for a product which would allow its owner to be demonstrably free of the ties of everyday office activity'. Atkinson uses methods derived from 'social

construction of technology' scholars as well as the psychoanalytic idea of 'transference' and pays close attention to the social and cultural messages associated with the laptop.

## Discourse-based studies

In this article, Hayward begins with the 'discursive turn' in history, noting Hayden White's 'relativist' position and Michel Foucault's notion of historical research as a kind of 'archeology'. Hayward then examines the specific case of 'good design' in Britain in the 1930s and 1940s as a discourse. Hayward writes: 'From this Foucauldian perspective it is possible to regard good design in terms of the exercise of power, concomitant with a hegemonic idea of progress or modernity, and the antithesis to a contrary world of 'bad' or 'uncultivated' design.' Hayward's sources for identifying a coherent discourse of 'good design' include '[g]overnment agencies, exhibitions, journals and radio broadcasts' that 'ascribed an almost fetishistic significance to the well-designed everyday object.' As well as these, Hayward uses Pevsner, Anthony Bertram's book on design and Frank Pick's 1937 report as constituting a 'good design' lobby aiming to 'to foster this rational way of seeing.'

Working on an even larger scale, H. Kumar Vyas begins with the idea that 'one cannot think of modern design in relation to a country like India without understanding the highly encapsulated experience of industrialization (from which modern design is inseparable) nurtured by several kinds and levels of production technology, both old and new, and without appreciating the qualitative distinction that exists between a process by which an old culture assimilates a modern, creative discipline and the one which is rather superficially grafted on as an act of 'technology transfer'. Vyas challenges the simple teleological progression of technological development and industrial design—arguing that Indian crafts engage in modern means of distribution, consumption and production. In reconsidering craft in this way, Vyas' method involves a challenge to the typical—and simplistic—division between hand-crafted and industrial objects.

In another article focused on a global scale, Anna Calvera advocates a 'geographical approach' that 'works from the particular to the general and, through sharing particularities, it should introduce new interpretative models (might we also call these larger narratives?) that are adapted to local realities'. She notes Edgar Morin's 'polycentric approach' in which 'the map reflects the coexistence of parallel, not alternate, histories interacting with one another', a network rather than a one-way flow from centre to periphery. 'For a local or national historian,' Calvera argues, 'there is a more complex task to do than to register influences because there is a process of adaptation of the ideas and aesthetic references, or technological innovation, coming from abroad and, through feedback, results become subtly different'. This comparative approach, drawn from Braudel, aims to understand the interaction of the local and the global in a non-hierarchical way.<sup>67</sup>

Finally, Grace Lees-Maffei begins with Walker's 'Production-Consumption' model (discussed above) and proposes mediation as a 'third stream in design history'. Mediation, she argues, operates both in terms of mediating channels (advertising and marketing, for example) and designed objects as 'mediating devices'. Lees-Maffei notes design history's early focus on objects, manufacturers and designers—primarily a focus on production—then a subsequent focus on consumption inspired by French structuralism and post-structuralism, British cultural studies, feminist historians and anthropologists. Mediation, Lees-Maffei's third stream, is borrowed from Tony Fry, yet she extends his

use of it from consumer guidance to include ‘the role of designed goods themselves as mediating devices’.<sup>68</sup>

## Methodological challenges

The most recent attempt to survey design history’s methodological challenges, Kjetil Fallan’s *Design History: Theory and Method*, was published in 2012. In it, Fallan defined design history broadly, arguing for an inclusive ‘design culture’ closely aligned to cultural history.<sup>69</sup> He rejected art historical methods and identified methods derived from science and technology studies, particularly Actor-Network-Theory and script analysis as crucial for design historians.<sup>70</sup> However, he offered little guidance on how we might use them. Certainly, the lack of documentary evidence surrounding everyday objects from the past is a limiting factor. And, while these methods are potentially useful, they do not necessarily offer solutions to some of the pressing methodological challenges facing design historians. For the sake of clarity and brevity, I have identified seven of these:

### 1. ‘Reading’ design

Design histories that focus primarily on the end product of a design process inevitably transform a physical object into a ‘text’ to decipher. However, the role of various plans, models, prototypes or iterations might be additional objects of design historical investigation that are not always considered (or no longer existent).<sup>71</sup> And, even if such a holistic approach were possible, what if, following Agnew’s article on the Spitfire, we consider design as the process of negotiation and compromises between designer, client, manufacturer, engineers and users that results in an end product? How might design historians reconstruct this process?

### 2. Cultural location and bias

Dilnot’s ‘new’ design histories developed in Europe, particularly in England. The overarching narratives and dominant assumptions about design and its history remain Eurocentric, although the last decade has seen significant challenges to this.<sup>72</sup> However, to truly advance, design historians will need to further question how and why they gather empirical evidence, and how it works within structured narratives. One example—yet to be taken up by design historians—is the use of indigenous methodologies, which offer not only alternative sources such as oral evidence and landscapes but also the idea of material culture embedded in alternative cultural knowledge systems and world-views.<sup>73</sup>

### 3. Periods and segmentation

Although a significant amount of research is beginning to redraw design history’s geography, the defining epochs or periods used by design historians seem little changed.<sup>74</sup> Should design history’s segmentation of historical time continued to be defined by European modernism, for example, or by broader historical notions? An alternative might be to consider the Anthropocene as a significant turning point. A term borrowed from geologists and earth scientists, the Anthropocene describes the condition in which human activity is the dominant force in the planet’s interacting processes.<sup>75</sup> How might design historians incorporate interrelated webs of relationships between humans, technological devices, animals, plants, and larger forces such as the oceans?

### 4. The lone scholar

A lone scholar is only ever going to complete limited studies and the majority of design historical research is done by individuals. While there are various institutional reasons for this, the access to vast quantities of information and global connectedness offer the possibility of broad research projects involving groups of scholars across multiple

countries. Ongoing collaborative research—such as is common in the social sciences, for example—is rare among design historians.

## 5. Archives

While the limitations of archives and collections was noted above, a new wave of digital archives and methods offer new possibilities. Digital collections, particularly useful for the storage of ephemera, photographs and visual evidence, have become increasingly accessible, as have powerful search engines, digital libraries and databases. The possibilities posed by the 'Digital Humanities' and 'big data', while often overstated, may prove useful for design historians. Certainly, the idea of gathering evidence on a large scale and analysis of that data via algorithms may be useful for some studies.

## 6. Immaterial Design

The recent focus on materiality belies an essential aspect of much recent design practice that operates either in the digital realm (as in website or video game design) or in systems and services. Beyond the material end-product of design, an immaterial design history might consider the intangible aspects of design—not simply a train as a designed artefact, for example, but how it functioned within a designed (physical) network and the design of timetables, tourism promotion or expanded commercial distribution networks.

## 7. Purpose

Finally, returning to Pevsner's polemic, it is worth concluding with perhaps the most difficult question: What is design history for? Does it have an instrumental role of some kind, such as to make informed judgments about the present or the future? If design is ultimately a practice devoted to envisaging a better future or ideal world, then surely an historical understanding of how we got to this point is necessary. But, more than this, if design 'designs' our present, then design decisions made in the past impact on our lives today.<sup>76</sup>

Over the past three decades, design history—at least as it has appeared in the *Journal of Design History*—has not yet codified a distinctive methodology. And, in an era of increasingly cross-disciplinary and trans-disciplinary scholarship, its diversity and eclecticism may well prove to be strengths. In terms of scale, from intimate, object-based studies to global, discourse-based studies, design history's elasticity is also potentially a strength. Yet Dilnot's call for 'critical self-reflection' needs reiteration to both established researchers and newcomers to the field, particularly within the context of ever-increasing research outputs and a seemingly endless stream of academic journal and book publishing. By periodically reviewing our methods, we might better clarify design history's value to a broader audience and better define its direction as a discipline.

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## Notes

- 1 On Ranke as the 'father' of modern historical methods, see John H. Arnold, *History: A Very Short Introduction* (London: Oxford University Press, 2000), 34–35; and Fritz Stern, ed., *The Varieties of History: From Voltaire to the Present* (New York: Vintage Books, 1973), 54: 'Leopold von Ranke (1795–1886) is the father as well as the master of modern historical scholarship.' Historical research, notes Georg Iggers more recently, was founded on 'the critical examination of primary sources'. Georg Iggers, 'Reflections on the Historiography of the Twentieth Century from the Perspective of the Twenty-First Century', *Historiein*, 16, no. 1–2 (2017): 150.
- 2 Leopold von Ranke, *Introduction to The History of the Latin and Teutonic Nations, 1494–1535*, originally published in 1824. From Leopold von Ranke, *The Secret of World History: Selected Writings on the Art and Science of History*, ed. and trans. Roger Wines (New York: Fordham University Press, 1981), 58. The original German, *wie es eigentlich gewesen*, is also translated as 'as it was' or 'as it actually was'.
- 3 See Hans Schleier, 'Ranke in the Manuals on Historical Methods of Droysen, Lorenze and Bernheim', in Georg G. Iggers and James M. Powell, eds., *Leopold Von Ranke and the Shaping of the Historical Discipline*. Syracuse, NY: Syracuse University Press, 1990.
- 4 Peter Lambert, 'The Professionalization and Institutionalization of History', in Stefan Berger, Heiko Feldner and Kevin Passmore, *Writing History: Theory and Practice*, 2nd ed. (London: Bloomsbury, 2010), 43. Lambert notes that Ranke was not the originator of this method but its most successful promotor, and that scholars have since discovered Ranke's historical research relied far more heavily on secondary research than he suggested.
- 5 Ranke, from *The History of England Principally in the Seventeenth Century*, 1875, in Ranke, *The Secret of World History: Selected Writings on the Art and Science of History*, 243.
- 6 Anna Green, *Cultural History* (Basingstoke: Palgrave Macmillan, 2008), 11.
- 7 See 'Society and Festivals', in Jacob Burckhardt, *The Civilization of the Renaissance in Italy*, trans. S.G.C. Middlemore (London: The Phaidon Press, 1995), 186–221. Later works included *Geschichte der neueren Baukunst: Die Renaissance in Italien* ('History of Early Modern Architecture: The Renaissance in Italy'), 1867, while his unpublished research on Renaissance art was published in various forms after his death in 1897. A recent and accessible English-language version is Jacob Burckhardt, *Italian Renaissance Painting according to Genres*, trans. David Britt and Caroline Beamish. Los Angeles: Getty Publications, 2005.
- 8 This was based on a Hegelian ideal, explained in Hegel's *Philosophy of History*, first delivered as lectures in the 1820s, but not published until after his death, first in 1837, then in an 1840 edition, which comprised his theory of 'world-history' as determined by *Geist*. See Will Dudley, *Hegel and History*. Albany: State University of New York Press, 2009.
- 9 Richard Sigurdson, *Jacob Burckhardt's Social and Political Thought* (Toronto: University of Toronto Press, 2004), 78.
- 10 Burckhardt in *The Civilization of the Renaissance in Italy*, 1.
- 11 The American 'New Historians' in the first decades of the twentieth century, for example, drew upon anthropology, economics and sociology. Inspired in part by pragmatism, historians James Harvey Robinson, Charles Beard and others sought to make history useful. See Peter Novick, ed., *That Noble Dream: The 'Objectivity Question' and the American Historical Profession*. Cambridge: Cambridge University Press, 1988.
- 12 Marc Bloch, *The Historian's Craft*, trans. Peter Putnam (New York: Vintage Books, 1953), 66. He mentions the convergence on page 67.
- 13 Febvre, cited in Peter Burke, *The French Historical Revolution: The Annales School, 1929–2014* (Stanford: Stanford University Press, 2015), 3, who notes the original as Febvre's 1953 book, *Combats pour l'histoire*.
- 14 Fernand Braudel, 'History and the Social Sciences: the Longue Duree', in *On History*, trans. Sarah Matthews. Chicago: University of Chicago Press, 1980. This essay was originally published in *Annales* in 1958. Lucien Febvre was the first to engage with geography, in his *A Geographical Introduction to History*, published in 1922.
- 15 Fernand Braudel, *Capitalism and Material Life, 1400–1800*, trans. Miriam Kochan. London: Fontana/Collins, 1973.
- 16 Fernand Braudel, op.cit., Chapter 1, 'Weight of Numbers', 1–65. Burke also notes the rise, from the 1950s to the 1970s of the 'quantitative revolution' and use of statistical analysis by Annales historians. See Burke, op.cit., 60–64.
- 17 See E.P. Thompson, *The Making of the English Working Class*. New York: Vintage Books, 1963. Although Thompson notes an overlap with sociological methods, in the Preface he describes his book as a biography of the English working class from its adolescence until its early manhood, (11). The gender problems of Thompson's narrative also begin in this statement.
- 18 Sheila Rowbotham, *Hidden From History: 300 Years of Women's Oppression and the Fight Against It*. Harmondsworth, England: Penguin Books, 1974. In the



- preface, Rowbotham makes explicit the contemporary impact on historical research: 'This book comes very directly from a political movement' (ix).
- 19 Two different ways in which the historical method was challenged here are Robert Young, *White Mythologies: Writing History and the West*. London and New York: Routledge, 1990; and Dipesh Chakrabarty, *Provincializing Europe: Postcolonial Thought and Historical Difference*. Princeton and Oxford: Princeton University Press, 2000.
  - 20 Hayden White, 'The Historical Text as Literary Artefact', in *Tropics of Discourse: Essays in Cultural Criticism* (Baltimore: John Hopkins University Press, 1978), 82.
  - 21 The culmination of this doubt over historical methods came in Keith Jenkin's popular 1991 book, *Rethinking History*, in which he argued that the key question was not 'what is history?' but 'who is history for?'. See Keith Jenkins, *Rethinking History* (New York and London: Routledge, 2003), 31.
  - 22 Paul Feyerabend, *Against Method* (London and New York: Verso, 1991, reprinted), 12.
  - 23 Yet academic research continued at an ever-increasing rate in the first two decades of the twenty-first century. And, as classicist Mary Beard has proved in the last decade or so, historical research is potentially as engaging and provocative to a mainstream audience as it has ever been.
  - 24 Donald Preziosi, *The Art of Art History: A Critical Anthology* (Oxford: Oxford University Press, 2009), 14. Preziosi notes that Wollfin's fundamental concepts for understanding paintings and their composition also had an impact on early archaeological research.
  - 25 See Linnea Wren and Travis Nygard, 'Heinrich Wölfflin', in Chris Murray, ed., *Key Writers on Art: The Twentieth Century* (London and New York: Routledge, 2002), 275–281; also Christine B. Verzar, 'After Burckhardt and Wölfflin; was there a Basel School of Art History?', *Journal of Art Historiography*, no. 11 (2014). This comparative practice has remained fundamental to art historical pedagogy to the present.
  - 26 Preziosi, op.cit., 13.
  - 27 Most influential was Panofsky's 1939 *Studies in Iconology*, in which he establishes principles which 'reveal the basic attitude of a nation, a period, a class, a religious or philosophical persuasion'. Panofsky, quoted in Juliet Graver Istrabadi, 'Erwin Panofsky', in Chris Murray, ed., op.cit., 225.
  - 28 See Ute Engel, "'Fit for its purpose": Nikolaus Pevsner Argues for the Modern Movement', *Journal of Design History*, 28, no.1 (2015), 15–32.
  - 29 Nikolaus Pevsner, *An Enquiry into Industrial Art in England* (London: Cambridge University Press, 1937), 12.
  - 30 Ute Engel 'The Formation of Pevsner's Art History: Nikolaus Pevsner in Germany 1902–1935', in *Reassessing Nikolaus Pevsner*, ed. Peter Draper (Abingdon and New York: Taylor and Francis, 2004), 33.
  - 31 Stefan Muthesisus, 'Germanness, Englishness, Jewishness, scientificness, popularization?', in *Reassessing Nikolaus Pevsner*, ed. Peter Draper, op.cit., 59. Muthesisus also notes: 'Pevsner was one of those academic practitioners who normally did not think it necessary to try and explain how he pursued his research. 'Methodology', or even terms like 'general aims' were not important for him.' (67).
  - 32 See Engel, 'The Formation of Pevsner's Art History: Nikolaus Pevsner in Germany 1902–1935', 37: So Pevsner developed the concept of a 'social history of art', which should deal with the 'changing relations between the artist and the world surrounding him', 'the history of art as social activity'. Reyner Banham continued Pevsner's history of modernist design with his 1960 *Theory and Design in the First Machine Age*, though, as Penny Sparke notes, added an interest in objects of mass culture. See Penny Sparke, 'From Production to Consumption in Twentieth Century Design', in Jeremy Aynsley and Harriet Atkinson, eds., *The Banham Lectures: Essays on Designing the Future* (Oxford and New York: Berg, 2009), 127–142.
  - 33 Siegfried Giedion, *Mechanization Takes Command—A Contribution to Anonymous History* (New York: Oxford University Press, 1948), v.
  - 34 See Giedion: 'The history of styles follows its theme along a horizontal direction; the history of types along a vertical one', (10).
  - 35 Giedion, 11.
  - 36 Anne Gerritsen and Giorgio Riello, 'Introduction: Writing Material Culture History', in Anne Gerritsen and Giorgio Riello, eds., *Writing Material Culture History* (London: Bloomsbury, 2015), 1.
  - 37 A good overview of historical methods and material culture can be found in Alan Mayne, 'Material Culture', in Simon Gunn and Lucy Faire, eds., *Research Methods for History* (Edinburgh: Edinburgh University Press, 2011), 49.
  - 38 David Lowenthal, *The Past is a Foreign Country: Revisited* (Cambridge: Cambridge University Press, 2015), 392. On this bridge to the past provided by physical artefacts, see his section, 'Relics', 383–410.
  - 39 Simon Schama, *The Embarrassment of Riches: An Interpretation of Dutch Culture in the Golden Age*. New York: Vintage Books, 1987; Asa Briggs, *Victorian Things*. Phoenix Mill: Sutton Publishing, 2003 (original 1988).
  - 40 The *Journal of Material Culture* started in 1996.
  - 41 Essential early sources for this material turn are: Arjun Appadurai, ed., *The Social Life of Things: Commodities*



- in *Cultural Perspective*. Cambridge: Cambridge University Press, 1986, and Daniel Miller, *Material Culture and Mass Consumption*. Oxford and Cambridge, Mass.: Blackwell, 1987.
- 42 For a good overview of the complete range of 'material culture studies', see Christopher Pinney, ed., *Handbook of Material Culture*. London: Sage, 2006. Useful overviews of the relationships between art history and material culture studies are Jules David Prown, 'Mind in Matter: An Introduction to Material Culture Theory and Method', *Winterthur Portfolio*, 17, no. 1 (1982): 1–19; and Jules David Prown, 'In Pursuit of Culture: The Formal Language of Objects', *American Art*, 9, no. 2 (1995): 2–3.
  - 43 Bill Brown, 'Thing Theory', *Critical Inquiry*, 28 (2001): 7. Brown expanded on his theorization of the 'mutual constitution and mutual animation of subject and object' in Bill Brown, *Other Things* (Chicago: University of Chicago Press, 2016), 19.
  - 44 In design, the most notable recent overview is Leslie Atzmon and Prasad Boradkar, eds., *Encountering Things: Design and Theories of Things*. London and New York: Bloomsbury, 2017.
  - 45 Clive Dilnot, 'The State of Design History, Part 1: Mapping the Field', *Design Issues*, 1, no. 1 (1984): 12.
  - 46 Clive Dilnot, 'The State of Design History, Part 2: Problems and Possibilities', *Design Issues*, 1, no. 2 (1984): 12.
  - 47 Clive Dilnot, *ibid.*, 15. He is referring to Victor Papanek, specifically his classic book, *Design for the Real World: Human Ecology and Social Change*. New York: Pantheon Books, 1971.
  - 48 Cheryl Buckley, 'Made in Patriarchy: Towards a Feminist Analysis of Women and Design', *Design Issues*, 3, no. 2 (1986), 3. Buckley drew upon the work of feminist historians (including Rowbotham—see 7) and art historians such as Linda Nochlin and Griselda Pollock. Other valuable sources for a feminist critique of methods are Judy Attfield, 'FORM/ female FOLLOWS FUNCTION/male: Feminist Critiques of Design', in John A. Walker, *Design History and the History of Design* (London: Pluto Press, 1989), 199–225; Judy Attfield and Pat Kirkham, eds., *A View from the Interior: Feminism, Women and Design*. London: Women's Press, 1989; Pat Kirkham, ed., *The Gendered Object*. Manchester: Manchester University Press, 1996; and Brenda Martin and Penny Sparke, eds., *Women's Places: Architecture and Design, 1860–1960*. New York and London: Routledge, 2003.
  - 49 Tony Fry, *Design History Australia: A Source Text in Methods and Resources* (Sydney: Hale and Iremonger, 1988), 74.
  - 50 John A. Walker, *Design History and the History of Design* (London: Pluto Press, 1989), 1.
  - 51 Walker, *ibid.*, 5–6.
  - 52 Walker, *ibid.*, 68–73; quotation taken from page 68.
  - 53 Walker, *ibid.*, 100.
  - 54 Walker, *ibid.*, 103. In pedagogy, this method was popularized by Wolfflin, by using pairs of slides, yet Walker also notes it was used by Pugin in *Contrasts* to celebrate the Gothic over present (104).
  - 55 Walker, *ibid.*, 110.
  - 56 Social history is typified by Adrian Forty, *Objects of Desire: Design and Society since 1750*. London: Thames and Hudson, 1986; semiotics by Roland Barthes, *Mythologies*, trans. Annette Lavers. London: Paladin Books, 1973.
  - 57 Christopher Bailey, 'Editorial', *Journal of Design History*, 1, no. 1 (1988): 1.
  - 58 With regard to methodology, some of the more challenging *Journal of Design History* special issue introductions include Linda Sandino's 'Oral Histories and Design', 19, no. 4 (2006); Tim Putnam's 'Model, Method and Mediation in the History of Housing Design', 23, no. 1 (2010); Artemis Yagou's 'Uniforms', 24, no. 2 (2011); Nicolas P. Maffei and Tom Fisher's 'Shininess', 26, no. 3 (2013); and Regina Lee Blaszczyk's 'Colour and Design', 27, no. 3 (2014).
  - 59 See Igor Kopytoff, 'The Cultural Biography of Things: Commoditization as Process', in Arjun Appadurai, ed., *op.cit.*, 64–91.
  - 60 In this respect, it is similar to Gaston Bachelard's *The Poetics of Space*, trans. Maria Jolas. Boston: Beacon Press, 1994. The other possible theoretical framework Graves mentions, Lacanian psychoanalysis, was used by theorists looking at advertising, such as Judith Williamson in *Decoding Advertisements: Ideology and Meaning in Advertising*. London: Marion Boyars, 1978.
  - 61 Her collected papers on this topic are in Jane Graves, *The Secret Lives of Objects*. Bloomington, USA: Trafford Publishing, 2009.
  - 62 See Bill Hillier and Julienne Hanson, *The Social Logic of Space* (Cambridge and New York: Cambridge University Press, 1984), 2. Rather than singular objects, they understand objects in terms of 'systems of spatial relations'.
  - 63 Pennell extended this research recently in a monograph, *The Birth of the English Kitchen, 1600–1850* (London and New York: Bloomsbury, 2016), that considers the kitchen using a wide variety of primary evidence, including kitchens, utensils and furniture, as well as textual documentation.
  - 64 Campbell further developed the relationship between architectural and design modernism and tuberculosis and a 'therapeutic lifestyle' in an additional article. See Margaret Campbell, 'What Tuberculosis did

- for Modernism: The Influence of a Curative Environment on Modernist Design and Architecture', *Medical History*, 49 (2005), 463–488.
- 65 This is, of course, recent history, and such methods clearly will not work when applied to nineteenth-century examples.
- 66 These include 'The (In)Difference Engine: Explaining the Disappearance of Diversity in the Design of the Personal Computer', *Journal of Design History*, 13, no. 1 (2000), 59–72; and 'The Curious Case of the Kitchen Computer: Products and Non-Products in Design History', 23, no. 2 (2010), 163–179; and an earlier article, 'Computer Memories: the History of Computer Form', *History and Technology*, 15, no. 1/2 (1998), 1–32, as well as a monograph, *Computer*, London: Reaktion Books, 2010.
- 67 This was extended by Glenn Adamson, Giorgio Riello and Sarah Teasley, eds., *Global Design History*. London and New York: Routledge, 2011; and D.J. Huppertz, 'Globalizing Design History and Global Design History', *Journal of Design History*, 28, no. 2 (2015): 182–202.
- 68 Lees-Maffei's work on domestic advice literature contains examples of methods appropriate to mediation. See both the special issue on advice literature, edited by Grace Lees-Maffei, 'Studying Advice: Historiography, Methodology, Commentary, Bibliography', *Journal of Design History*, 16, no. 1 (2003); and Grace Lees-Maffei, *Design At Home: Domestic Advice Books in Britain and the USA Since 1945*. London and New York: Routledge, 2013.
- 69 Kjetil Fallan, *Design History: Understanding Theory and Method* (Oxford and New York: Berg, 2010), 149.
- 70 Historians specializing in technology, such as Thomas Hughes and Ruth Schwartz Cowan, for example, have analysed how technological artefacts are made, consumed and domesticated.
- 71 Dilnot notes this in his 1984 survey of the field.
- 72 The US-based journal *Design Issues* has always included some historical articles from a broad geographical scope since its inception, though the *Journal of Design History's* recent series of special issues on Asian design, for example, demonstrates a significant shift in geographical focus.
- 73 See, for example, overviews such as Margaret Kovach, *Indigenous Methodologies: Characteristics, Conversations, and Contexts*. Toronto: University of Toronto Press, 2009; and Chilisa Bagele, *Indigenous Research Methodologies*. Thousand Oaks, California: Sage, 2012.
- 74 My recent *Modern Asian Design* was an attempt to address both the cultural location problem and this segmentation problem. See D.J. Huppertz, *Modern Asian Design*. London: Bloomsbury, 2018.
- 75 Human imprint on the planet, scientists argue, is now complete—greenhouse gases, species extinction, deforestation, ocean acidification, pollution, reduction of biodiversity—and our impact on planetary processes is rapidly approaching unknown consequences. A good overview is Jeremy Davies, *The Birth of the Anthropocene*, Berkeley: University of California Press, 2016. In one of the first published articles on the Anthropocene, Paul J. Crutzen and Eugene F. Stoermer, proposed the later part of the eighteenth century, coinciding with James Watt's invention of the steam engine, as the beginning of the Anthropocene. See Paul J. Crutzen and Eugene F. Stoermer, 'The "Anthropocene"', *IGBP Newsletter*, no.41 (2000), 16–18. I borrowed the 'Great Acceleration' from Simon L. Lewis and Mark A. Maslin, 'Defining the Anthropocene', *Nature*, 519, 12 March (2015):, 171–180. Other scientists such as Paul Crutzen use it too.
- 76 This seems to be the challenge issued by Tony Fry, Clive Dilnot and Susan C. Stewart in *Design and the Question of History*. London: Bloomsbury, 2015. Statements such as Tony Fry's 'much of the material fabric of the world we have already created, and its accompanying problems, directs our future life' (105), for example, seem to suggest a different type of instrumental role for design history.